Lab Report : 1

Problem no.- 1:

Suppose you have two arrays of similar length. Now you have perform addition the elements of the arrays position by position from left to right. While perform addition you have to consider the carry and the carry that you get from a addition operation has to be added with the next addition operator. You have to create a new array from this operation. Now reverse the two arrays and perform similar operations. Check the two output arrays you get from addition operation, if the are same print "SAME" else print "NOT SAME" .

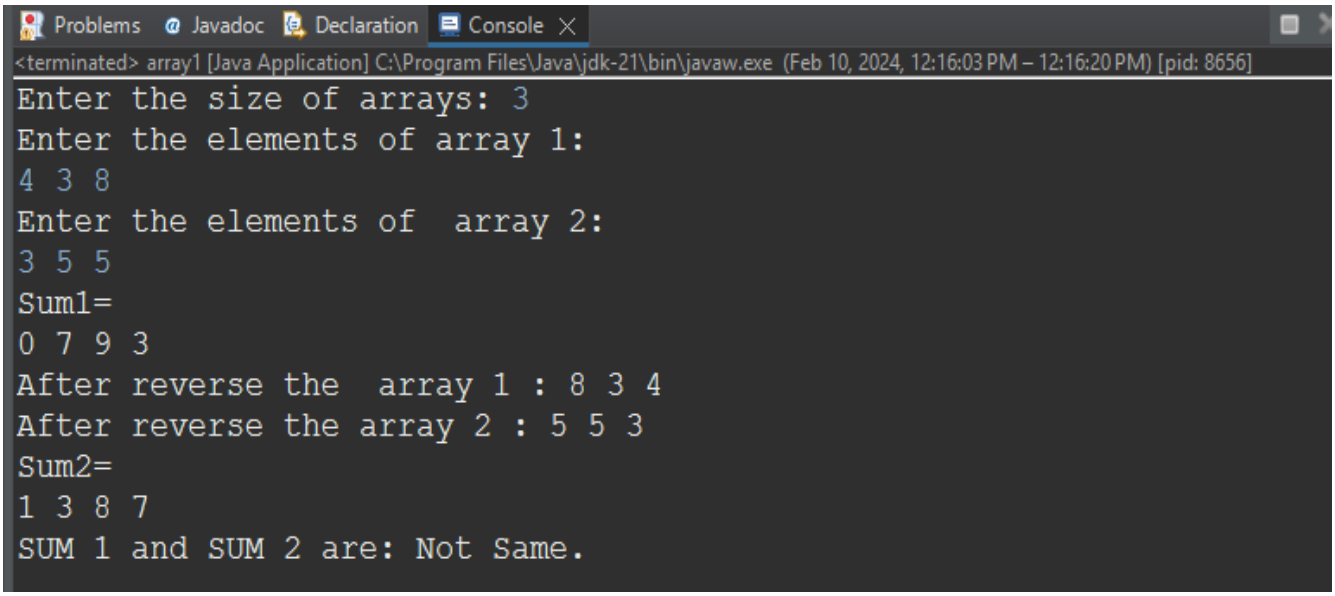
Code :

```
import java.util.Scanner;

public class array1 {
    public static void main(String[] args) {
    Scanner inp = new Scanner(System.in);

    System.out.print("Enter the size of arrays: ");
    int size = inp.nextInt();

    int[] arr1 = new int[size];
    int[] arr2 = new int[size];
    System.out.println("Enter the elements of array1:");
    for (int i = 0; i < size; i++) {
        arr1[i] = inp.nextInt();
    }
    System.out.println("Enter the elements of array2:");
    for (int i = 0; i < size; i++) {
        arr2[i] = inp.nextInt();
```

```
}

int[] Result1 = new int[size+1];
int sum1, carry1 = 0;
int count1=size;
for (int i = size-1; i >=0; i--) {
     sum1 = arr1[i] + arr2[i] + carry1;
    Result1[count1--] = sum1 % 10;
    carry1 = sum1 / 10;
}
if(carry1>0) {
    Result1[0]=carry1;
}

System.out.println("Sum1= ");
for (int i = 0; i < size+1; i++) {
    System.out.print(Result1[i]+" ");
}
System.out.println();

int temp=0;
int[] rev_Arr1 = new int[size];
int[] rev_Arr2 = new int[size];
for (int i =size-1; i>=0; i--) {
    rev_Arr1[temp] = arr1[i];
    rev_Arr2[temp] = arr2[i];
    temp ++;
}
System.out.print("After reverse the  array 1 : ");
for (int i = 0; i < size; i++) {
    System.out.print(rev_Arr1[i]+ " ");
}
System.out.println();
System.out.print("After reverse the array 2 : ");
for (int i = 0; i < size; i++) {
    System.out.print(rev_Arr2[i]+ " ");
}
System.out.println();

int[] Result2 = new int[size+1];
```

```
        int sum2, carry2 = 0;
        int count2=size;
        for (int i = size-1; i >=0; i--) {
             sum2 = rev_Arr1[i] + rev_Arr2[i] + carry2;
            Result2[count2--] = sum2 % 10;
            carry2 = sum2 / 10;
        }
        if(carry2>0) {
            Result2[0]=carry2;
        }
        System.out.println("Sum2= ");
        for (int i = 0; i <size+1; i++) {
            System.out.print(Result2[i]+" ");
        }
        System.out.println();

        boolean Equal = true;
        for (int i = 0; i < size; i++) {
            if (Result1[i] != Result2[i]) {
                Equal = false;
                break;
            }
        }
        System.out.print("SUM 1 and SUM 2 are: ");

        if (Equal) {
            System.out.println("Same.");
        } else {
            System.out.println("Not Same.");
        }
    }
}
```

Output :


Problems
Javadoc
Declaration
Console
<terminated> array1 [Java Application] C:\Program Files\Java\jdk-21\bin\javaw.exe (Feb 10, 2024, 12:16:03 PM – 12:16:20 PM) [pid: 8656]
Enter the size of arrays: 3
Enter the elements of array 1:
4 3 8
Enter the elements of array 2:
3 5 5
Sum1=
0 7 9 3
After reverse the array 1 : 8 3 4
After reverse the array 2 : 5 5 3
Sum2=
1 3 8 7
SUM 1 and SUM 2 are: Not Same.